distinguishes clearly from the cited prior art and therefore places the application in condition for allowance.

Reconsideration and withdrawal of the rejections of all of the claims under consideration as being anticipated by the Takeshima et al. Patent No. 5,388,406 or as being unpatentable over Takeshima et al. in view of the Cornelison et al. Patent No. 5,240,682 or the Neal et al. Patent No. 4,755,499 is respectfully requested.

Claim 1, the only independent claim under consideration, is directed to an internal combustion engine arrangement and it requires a spark-ignited internal combustion engine, an exhaust line receiving exhaust gas from the internal combustion engine, and an oxide gas absorber in the exhaust line including a support member and an absorption layer on the surface of a support member having a total surface area which is larger than that of the underlying area of the support member and accessible to exhaust gas flowing through the exhaust line for reversible absorption of at least one of nitrogen oxide and at least one oxide of sulfur. Claim 1 further requires a control unit means for controlling the temperature of the absorption layer by adjusting composition parameters of the exhaust gas to cause the absorption layer to be heated to a temperature of at least about 500°C at which the layer is regenerated by desorbing absorbed NO<sub>x</sub> or SO<sub>x</sub>.

With this arrangement, as described, for example, at page 7, lines 15-19 and also at page 10, lines 24-26 of the specification, the temperature of the absorption layer can be increased to the level required for desorption of absorbed NO<sub>x</sub> or SO<sub>x</sub>, i.e., at least about 500°C, by merely adjusting the composition parameters of the exhaust gas, such as the oxygen or fuel concentration, or the content of hot gases generated by burning a fuel, for

A32188 PCT/USA PATENT

example, thereby avoiding the necessity for reliance on electrical energy consumption in an electrical heater to raise the temperature of the absorbing layer to the required level.

No such arrangement is disclosed in or in any way suggested by the prior art relied upon in support of the rejection. In Takeshima et al. there is no disclosure of any control unit means for controlling the temperature of the absorption layer by adjusting composition parameters of the exhaust gas to cause the absorption layer to be heated to a temperature of at least about 500°C. Instead, as described, for example, at Col. 5, lines 28-32, the composition of the exhaust gas is adjusted only to facilitate release of NO<sub>x</sub> at a lower temperature. Thus, the adjustment described in Takeshima et al. does not in any way change the temperature of the absorption layer. Careful study of the Takeshima et al. patent reveals that, in every instance, heating of the absorption layer to a temperature of at least about 500°C to regenerate the layer is effected by energization of the electrical heater 24 or 84, (See for example, column 4, lines 20-24, column 5, lines 22-28, column 6, lines 44-52, column 7, lines 10-16, column 7, line 66 through column 8, line 4, column 9, lines 59-68, column 11, lines 53-64 and column 17, lines 15-22.) There is no suggestion in Takeshima et al. or in any of the other prior art that the Takeshima et al. control arrangement for heating the oxide gas absorber using an electrical heater should be completely reconstructed to substitute an arrangement for controlling the temperature by adjusting composition parameters of the exhaust gas as required by claim 1.

Accordingly, claim 1 is patentable over the prior art and should be allowed along with all of its dependent claims 2-32.

If the Examiner has any questions regarding the wording of the claims, the Applicant's attorney would welcome a telephone call to discuss them.

A32188 PCT/USA PATENT

Attached hereto is a marked-up version of the changes made to the specification and the claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

Respectfully submitted,

Dated: August 7, 2001

Francis J Hone

Patent Office Reg. No. 18,662

BAKER BOTTS L.L.P.

30 Rockefeller Plaza

New York, New York 10112-0228

Attorney for Applicants (212) 408-2534

## VERSION WITH MARKINGS TO SHOW CHANGES

## In the Claims:

## Claim 1 has been amended as follows:

--1. (Twice Amended) An internal combustion engine arrangement comprising: a spark-ignited internal combustion engine;

an exhaust line receiving exhaust gas from the internal combustion engine;

an oxide gas absorber in the exhaust line including a support member; and an absorption layer on a surface of the support member having a total surface area which is larger than that of the underlying area of the support member accessible to exhaust gas flowing through the exhaust line for reversible absorption of at least one nitrogen oxide  $(NO_x)$  and/or at least one oxide of sulfur  $(SO_x)$ ; and,

a control unit means for controlling the temperature of the absorption layer by adjusting composition parameters of the exhaust gas to cause [so that] the absorption layer to [can] be heated to a temperature of at least 500°C at which the layer is regenerated by desorbing absorbed NO<sub>x</sub> or SO<sub>x</sub>.—

6